

REMARKS/ARGUMENTS

Claims 1-3, 5-11, and 13-22 remain in the application. Claims 4 and 12 have been canceled.

The first section of the Office Action asks for drawing corrections. Drawing corrections are submitted herewith. The specification has been amended to include part number 213. No new matter has been added.

The second section of the Office Action objects to the title of the invention. A new title is supplied.

The third section of the Office Action rejects claims 7, 8, 15, 16, and 17 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The fourth section of the Office Action rejects claims 1-3, 9-11, 18, 19, and 22 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,657,957 B1 to Cheung *et al.*, "Cheung" hereinafter, in view of U.S. Patent No. 6,747,953 B1 to Qureshi *et al.*, "Qureshi" hereinafter.

The fifth section of the Office Action rejects claims 4 and 12 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claims 1 and 9 *supra*, and further in view of U.S. Patent No. 6,745,352 B2 to Cheng, "Cheng" hereinafter.

The sixth section of the Office Action rejects claims 5, 8, 13, and 16 under 35 U.S.C. §103(a) as being obvious over Cheung, Qureshi, and Cheng further in view of U.S. Patent No. 5,153,877 to Esaki *et al.*, "Esaki" hereinafter.

The seventh section of the Office Action rejects claims 6, 14, and 20 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi further in view of U.S. Patent No. 6,510,219 to Wellard *et al.*, "Wellard" hereinafter.

The eighth section of the Office Action rejects claims 7 and 15 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi further in view of U.S. Patent No. 5,390,188 to Dawson, "Dawson" hereinafter.

The ninth section of the Office Action rejects claim 21 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claim 9, and further in view of Esaki.

The tenth section of the Office Action identifies claim 17 as allowable if rewritten in independent form including all limitations of the base claim and intervening claims.

To expedite prosecution, all rejections will be treated as though applied to the claims as amended.

Applicant traverses all rejections and requests reconsideration. Applicant also reserves the right to swear behind references where appropriate.

§112 Rejections

Claims 7, 8, 15, 16, and 17 have been amended and the language objected to has been removed.

§103 Rejections

Claims 1-3, 9-11, 18, 19, and 22 stand rejected over Cheung in view of Qureshi.

The Office Action states:

[N]ote that the combined system [of Cheung] collects/stores the current and/or projected pack[et] loss quality requirement parameter/data over the specific time period/interval (i.e. the packet loss rate or error rate must be determined and measured for each of a plurality of time interval/period since rate is calculated over the time) in a current connection path/route (i.e. storing/collection is performed for each current quality data, thus it

is clear that it is collecting/storing for current path/route) over the IP network.

Office Action, page 5.

Applicants assert that their claims clearly distinguish over Cheung. Each evaluation in Cheung consults only the most recent sample of performance data. Cheung does not spell out what specific time period is covered by each sample. However, Cheung's covered periods are either disjoint -- in which case the evaluation is not a function of an interval and a prior interval -- or the periods covered are overlapping. In either case, Cheung does not meet the limitations of Applicants' claims.

Qureshi does not supply the limitations lacking in Cheung. Qureshi uses a running average (*e.g.*, overlapping time intervals) to evaluate call quality. *See, e.g.*, Qureshi, column 18, line 28 through col. 9, line 9. Qureshi's col. 18, lines 66-7, refers to "average packet loss across all calls using the [packet/voice gateway] pair." This is an average, and it may be kept dynamically (a running average), but it does not teach any time sequence of packet loss data for different intervals ("windows") -- let alone a smoothing algorithm across such windows. Thus, even in combination, Cheung and Qureshi do not disclose the limitations of Applicants' claims.

The Office Action states:

[H]aving the system of Cheung '957 and then given the teaching of Qureshi '953, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Cheung '957 for the purpose of providing [an] algorithm which utilizes past interval/interaction and current interval/iteration when computing the result, as taught by Qureshi '953, since Qureshi '953 states the advantages/benefits at col. 2, lines 54 to col. 3, lines 12 that it would provide a mechanism for determining the congestion and level of call blocking needed to provide a predetermined quality of service for calls. The motivation being that by taking the corrective action of blocking the

new/future calls according to the packet loss data, it can reduce or eliminate data loss.

Office Action, pages 6-7.

Applicants disagree that Qureshi provides a motivation to modify Cheung to create Applicants' invention. The referenced text in Qureshi merely sets forth general advantages of quality improvement. Qureshi nowhere discusses a means to maintain service in the face of transitory quality problems, let alone using an algorithm that is a function of nonoverlapping intervals to monitor call quality.

Because Cheung and Qureshi do not disclose the limitations of Applicants' claims even in combination, and because neither provides a motivation for modifying their teachings (let alone to combine and modify their teachings) to yield Applicants' invention, Applicants assert that their invention as claimed is not obvious over Cheung in view of Qureshi.

The fifth section of the Office Action rejects claims 4 and 12 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claims 1 and 9 *supra*, and further in view of Cheng.

The Office Action states:

Neither Cheung '957 nor Qureshi '953 explicitly discloses wherein said algorithm computes each time interval as a function of the data for that interval and at least one prior interval (see Cheng '352 col. 5 line 33-60, see col. 6 lines 7-43; note that sliding window averaging algorithm utilizes each time/number of interval/iterations as a[n] average data for past interval/iteration and the current interval/iteration to compute the average result/data).

However, the above-mentioned claimed limitations are taught by Cheng '352. In view of this, having the combined system of Cheung '957 and Qureshi '953, and then given the teaching of Cheng '352, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Cheung '957 and Qureshi '953, for the purpose of providing algorithm which utilizes past

interval/interaction and current interval/iteration when computing the result, as taught by Cheng '352, since Cheng '352 states the advantages/benefits at col. 1, lines 25-45 that it would provide accurate and reliable error rate estimation which adapts to channel condition changes. The motivation being that by estimating the error rate accurately, it can increase the capability to detect and correct the errors, thereby increasing the network reliability and performances.

Office Action, page 9.

Applicants disagree. Cheng does not teach the limitations of Applicants' claims; in fact, because Cheng teaches a method of estimating error rates that nowhere relies on direct measurement of error or data loss, it **teaches away** from Applicants' system. Moreover, Cheng is not concerned with packet loss and nowhere mentions packets or packet loss.

Cheng teaches a method for estimating transmission error rates when they are low. When error or data loss rates are low, determination of the actual error rate can require inconveniently long sampling times, so Cheng develops a faster technique to estimate error rate. Instead of averaging error (or packet loss) data, Cheng averages the counts of algorithm iterations needed to correctly reconstruct the data. In contrast, Applicants' claims require collecting actual data on packet loss (error rate). Accordingly, Cheng does not supply the teaching for which it is cited and does not supply the limitations lacking in Cheung and Qureshi.

The sixth section of the Office Action rejects claims 5, 8, 13 and 16 under 35 U.S.C. §103(a) as being obvious over Cheung, Qureshi and Cheng as applied to claim 4 *supra*, and further in view of Esaki.

Esaki is cited for teaching the estimation of packet loss rate using a weighted average. Esaki does discuss a weighted average at col. 14, ll. 20 *ff*. However, Esaki does not disclose a weighted average that concerns packet loss data. Esaki **estimates** packet

loss using a weighted average of peak bit rates. Accordingly, Esaki does not disclose the limitations of Applicants' claims, and does not render any claims obvious in combination with the cited art.

The seventh section of the Office Action rejects claims 6, 14, and 20 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claims 1 and 9 *supra*, and further in view of U.S. Patent No. 6,510,219 to Wellard.

Wellard is cited as disclosing blocking transmission after a minimum call duration and continuing monitoring prior to determining whether to block calls. Even if this were the case, Wellard does not supply the limitations lacking in Cheung and Qureshi and accordingly does not render the claims obvious even in combination with the cited art.

The eighth section of the Office Action rejects claims 7 and 15 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claims 1 and 9 *supra*, and further in view of Dawson.

Dawson is cited as disclosing packet loss represented by a prespecified limiting value. Dawson discloses packet loss represented by a value, but the value appears to be a loss counter, not a prespecified limiting value. In any event, Dawson does not supply the limitations missing in Cheung and Qureshi and accordingly does not render Applicants' claims obvious.

The ninth section of the Office Action rejects claim 21 under 35 U.S.C. §103(a) as being obvious over Cheung and Qureshi as applied to claims 9 *supra*, and further in view of Esaki.

Esaki is again cited for its purported teaching of a weighted average of packet cell loss data. As discussed *supra*, Applicants maintain that Esaki does not so teach.

As discussed, the cited art, taken singly or in any combination, does not supply the limitations of Applicants' claims. Moreover, there is no teaching to modify the existing

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art to yield Applicants' invention. Accordingly, Applicants' invention as claimed is not obvious over the cited art.

CONCLUSION

Applicants submit that the invention as claimed is not disclosed, taught, or suggested by the cited art. Therefore, it is submitted that all pending claims are allowable over the art of record and it is respectfully requested that the application be passed to allowance and issue.

Respectfully submitted,



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Attachments

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Amendments to the Drawings:

The attached sheet of drawings includes changes to Fig. 2. This sheet replaces the original sheet. In Figure 2, previously omitted processor 213 has been added.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes



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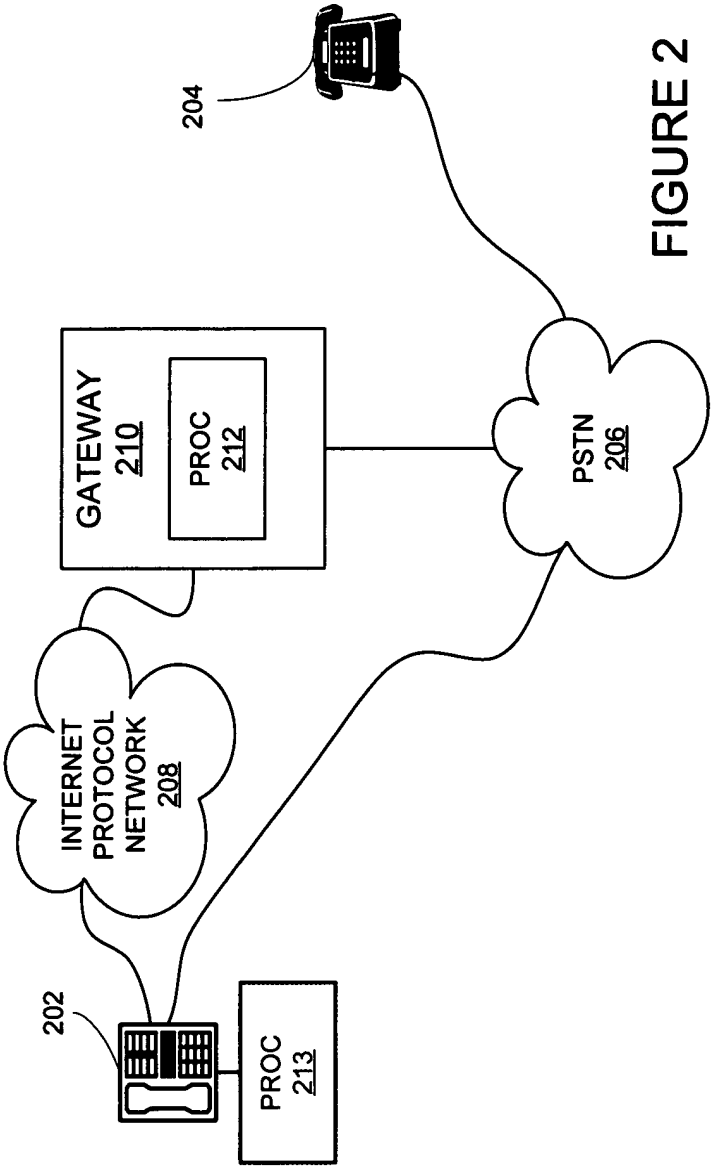


FIGURE 2